

The present species, though approaching the buff or tawny olive-colored *fidicinium* from Florida, differs from that species in color and in having slim femora usually armed with spines beneath.

Orchelimum crusculum, new species. A medium-sized, slender species, grass-green in color throughout, save the usual markings upon the occiput and disk of the pronotum, which are brown and less distinct in the female. In dried specimens the stridulating apparatus is sometimes slightly darkened, and the hind tibiae and tarsi are usually straw-colored. The hind femora are very slim and less inflated at the base than usual. The tegmina exceed the hind femora by about 3 mm., and these in turn are slightly exceeded by the wings.

Measurements. — Length of the body, male, 17 mm.; female, 17-18 mm.; of pronotum, male and female, 3.5 mm.; of tegmina, male, 17 mm., female 21 mm.; of hind femora, male, 14 mm., female, 15 mm.; of ovipositor, 11 mm.

Mr. Caudell has kindly compared a male and female of *crusculum* with material in the collection of the National Museum, and finds them unlike any species there represented.

HEMIPTERA HETEROPTERA OF WESTCHESTER COUNTY, N. Y.

J. R. DE LA TORRE BUENO,

WHITE PLAINS, N. Y.

In presenting to my fellow-entomologists this partial list of Hemiptera, I make no apologies. Elsewhere the value of faunal lists has been dwelt upon, and I need not repeat myself here. All lists (provided they be accurate and fairly representative) are helps to the proper knowledge of a fauna, and especially useful are those that refer to regions where collecting has been utterly neglected, or where intensive collecting has been done for some definite period.

As far as Hemipterous records go, Westchester county is as unknown as an uncharted island and might as well be a bare desert. It is my present aim to make good this deficiency, even though it be only partially. This list represents only two summers' collecting, devoted mainly to waterbugs.

If any there be who deem trivial such work as this, let such do constructive work before sitting in judgment. Let our New York entomologists devote themselves to their own State instead of endlessly camping on grounds already minutely and thoroughly explored.

The arrangement of the families and higher groups is according to Kirkaldy, with some modifications of my own in the aquatic forms. For reasons into which I need not enter in detail at the moment (although I may say they are based on breeding experiments and observations on nymphal stages, habits, etc.) I disagree with the prevailing fashion of putting *Hydrometra* Latreille, and *Mesovelina* M. & R. in the Gerridæ *sens. lat.* To me these two genera are distinctly more closely allied, the former to the Reduviidæ and the latter to the Nabidæ than to the Gerridæ, and I consider that they are certainly entitled to family rank. They *may* form a passage from the one to the other, but on the other hand, the differences between them are so great that it is scarcely possible they do, for they apparently are isolated tips of twigs in the great Reduvioid family tree. A paper on *Mesovelina* and its structure is in preparation by Kirkaldy, and after its appearance it is my purpose to go into the matter more at length.

It will be noted that the great family Miridæ (Capsidæ) is omitted. This is due to the fact that I do not collect this group at all, except for my friends, and to them I leave the task. Other comments and notes will be made in their proper places. The family names employed, with a few exceptions, are those rendered familiar by long usage, or those accepted by the more eminent of our latter-day Hemipterists. This is not to be interpreted as implying disagreement *in toto* with Kirkaldy's views in regard to synonymy, because the only reason for it is a reluctance to introduce into a faunal list any matter in controversy.

Superfamily *PENTATOMOIDEA*.

(CIMICOIDEA Kirkaldy.)

Family PENTATOMIDÆ.

CIMICIDÆ Kirkaldy.

Subfamily I. ASOPINÆ Schout.¹

Tribe *Asoparia* Schout.

Genus *Mineus* Stål.

1. *M. strigipes* H. S.

White Plains, Sept. 7 and 13. A recently transformed adult and a nymph (which later gave an adult) were taken on the earlier date. It is figured by Schouteden (op. c. pl. 4, fig. 10).

¹ In this subfamily the arrangement is according to Schouteden (Gen. Ins., No. 52).

Genus *Apateticus* Dallas.*(Podisus auct.)*2. *A. (Apæcilus) cynicus* Say.

White Plains, Aug. 31. Swept in a swampy meadow from grasses.

3. *A. (Apæcilus) bracteatus* Fitch.

White Plains, Sept. 19. Also swept from grasses in a hollow in an open lot. This is apparently the first actual record from this state since Fitch described the bug in 1852.

4. *A. (Eupodisus) maculiventris* Say.

White Plains, through summer. Kensico Lake, May 27, Scarsdale, Aug. 16. This is the most common form hereabouts. Occurs throughout the summer in grasses.

5. *A. (Eupodisus) modestus* Dallas.

Scarsdale, Aug. 5; Sept. 5. Swept in the woods from bushes, etc.

Subfamily PENTATOMINÆ.

Genus *Nezara*.6. *N. hilaris* Say.

White Plains, Aug. 31. Nymph in last instar; Sept. 7, 14 and 28. Scarsdale, Sept. 5, on golden-rod.

Genus *Cænus* Dallas.7. *C. delius* Say.

White Plains, common in summer in meadows. Scarsdale, Sept. 5.

Genus *Euschistus* Dallas.8. *E. variolarius* Pal. Beauv.

Common about White Plains at all times. Scarsdale, Aug. 15.

9. *E. tristigmus* Say.

Another common form in damp and marshy spots in White Plains. Scarsdale, Aug. 15 and Sept. 5.

10. *E. fissilis* Uhler.

White Plains from spring to autumn, in fields, usually in company with *E. variolarius*. Scarsdale, Aug. 15.

Genus *Mormidea* A. & S.11. *M. lugens* Fabr.

Common about White Plains in summer. Scarsdale, Aug. 15.

Genus Trichopepla Stål.12. **T. semivittata Say.**

White Plains, common in grasses through summer. Valhalla, May 27.

Genus Peribalus Muls. & Rey.13. **P. limbolarius Stål.**

White Plains, abundant on shepherds' purse (*Capsella bursapastoris* Mœnch) in July, August and September; nymphs in August.

Genus Brochymena A. & S.14. **B. quadripustulata Fabr.**

White Plains, April 14, torpid under bark of fallen apple-tree. Sept. 1, nymph.

Subfamily CYDNINÆ.

Genus Sehirus A. & S.15. **S. cinctus Pal. Beauv.**

Tarrytown, July 20 and 23.

Subfamily GRAPHOSOMINÆ.

Genus Amaurochrous Stål.

(= *Podops olim*, for North American species only.)

16. **A. cinctipes Say.**

White Plains, Sept. 13.

Subfamily SCUTELLERINÆ.

Genus Eurygaster Lap de Cast.17. **E. alternatus Say.**

White Plains, July and August, along the edges of a swampy meadow. A just-transformed adult on July 18.

Subfamily THYREOCORINÆ.

(*Corimelænina olim.*)

Genus Thyreocoris Schrank.

(= *Corimelæna auct.*)

18. **T. unicolor Pal. Beauv.**

White Plains, throughout summer. Scarsdale, Aug. 15.

19. **T. pulicaria.**

Common all summer in White Plains. Scarsdale, Aug. 15.

Family ARADIDÆ.

Subfamily MEZIRINÆ.

(= *Brachyrhynchinæ auct.*)

Genus *Aneurus* Curtis.20. *A. fiskei* Heid.

White Plains, January, February and March; September and November, adults, nymphs in various stages and ova, at almost any season. Occurs under bark of dead hardwood trees (oaks, hickory, etc.), preferably saplings and smaller branches. Rye Lake, Sept. 7.

21. *A. inconstans* Uhler.

White Plains; very common under bark of dead hardwood trees. Rye Lake, Sept. 7.

Genus *Neuroctenus* Fieb.22. *N. simplex* Uhler.

White Plains, Aug. 24. Crawling about on twigs of fallen oak.

Subfamily ARADINÆ.

Genus *Aradus* Fabr.23. *A. robustus* Uhler.

White Plains, Aug. 29, nymph in last instar, under stone.

Family COREIDÆ.

Subfamily MICTINÆ.

Genus *Archimerus* Burm.24. *A. calcarator* Fabr.

White Plains, July 22, Sept. 14 and 28, Oct. 5, adults; Aug. 31 and Sept. 28, nymphs. Rye Lake, Sept. 7.

Genus *Acanthocerus* Pal. Beauv.25. *A. galeator* Fabr.

White Plains, July 13, Sept. 14 and 28, adults; Aug. 31 and Sept. 5, nymphs.

Subfamily ACANTHOCEPHALINÆ.

Genus *Acanthocephala* Lap. de Castel.26. *A. terminalis* Dallas.

White Plains, July 29, two nymphs which later transformed to adults; Scarsdale, Sept. 5.

Subfamily CENTROSCELINÆ.

Genus *Anasa* A. & S.27. *A. tristis* de G.

White Plains, Aug. 30, Sept. 15.

Subfamily MICRELYTRINÆ.

Genus *Protenor* Stål.28. *P. belfragei* Hagl.White Plains, July 22 and 27, Aug. 31, Sept. 14, Oct. 5.
Locally abundant.

Subfamily ALYDINÆ.

Genus *Megalotomus* Fieb.29. *M. quinquespinosus* Say.

White Plains, July 27. Rye Lake, Sept. 7. This form I have met here very rarely indeed; but it is not very abundant anywhere.

Genus *Alydus* Fabr.30. *A. eurinus* Say.31. *A. pilosulus* H. & S.

These are two very common forms in Westchester Co., and are to be found during July, August and September in clover bunches in fields. Scarsdale and White Plains.

Subfamily CORIZINÆ.

Genus *Harmostes* Burm.32. *H. reflexulus* Say.White Plains, July 7, Aug. 30, Sept. 15 and 19, and Oct. 5.
Scarsdale, Aug. 5.Genus *Corizus* Fall.33. *C. lateralis* Say.White Plains, July 4 and 22, and Sept. 5 and 7. Scarsdale,
Aug. 5.

Subfamily BERYTINÆ.

Genus *Jalysus* Stål.34. *J. spinosus* Say.White Plains, July 28, Aug. 24, Sept. 7. Scarsdale, Aug. 5 and
15, Sept. 5. Rye Lake, Sept. 7.

Family LYGÆIDÆ.

Subfamily LYGÆINÆ.

Genus *Nysius* Dallas.35. *N. angustatus* Uhl.

White Plains, July 27, Sept. 13 and 16, Oct. 18 and 24. On the two latter dates taken about the roots of grasses.

36. *N. minutus* Uhl.

White Plains, Aug., Sept. 13 and 16, Oct. 3 and 18.

37. *N. jamaicensis* Dallas.

White Plains, July, September and October.

Genus *Kleidocerus* Westw.

(= *Ischnorhynchus auct.*)

38. *K. resedæ* Panz. (= *didymus* Zett.)

White Plains, July and September. Taken abundantly in sweet birch, both adults and nymphs. At other times swept.

Genus *Cymus* Hahn.39. *C. luridus* Stål.

White Plains, July and August.

Genus *Cymodema*.40. *C. tabida* Spin.

White Plains, July 16, Aug. 3.

Subfamily BLISSINÆ.

Genus *Ischnodemus* Fieb.41. *I. falicus* Say.

Kensico (Valhalla), May 27; White Plains Oct. 5. At Kensico it was swept in numbers from the low grasses growing on the damp little beaches of the lake.

Genus *Blissus* Klug.42. *B. leucopterus* Say.

White Plains, July 25, 28 and 31. Aug. 3 and 30; Sept. 19. This was swept from low grasses in a lawn and in a meadow. Nymphs occurred under stones and planks, as late as October. A recently transformed adult was bright red, except the black-spotted, milky-white wings.

Subfamily GEOCORINÆ.

Genus *Geocoris* Fallén.43. *G. bullatus* Say.

White Plains, Sept. 5, Oct. 3, 11, 18 and 24, in company with the following.

44. *G. discopterus* Stål.

White Plains through October, on a dry sandy spot, running over the earth, or at the roots of grasses. Most abundant species.

45. *G. ater* Fabr. (= *uliginosus* Say = *fuliginosus* auct.)

White Plains, Oct. 17. Scarsdale, Aug. 5. Rare.

46. *G. piceus* Say.

White Plains, Sept. 7, 19, Oct. 3, 11, 17 and 25. Taken by sweeping in fields, in patches of five-finger (*Potentilla Canadensis*) and under boards.

Subfamily PACHYGRONTHINÆ.

Genus *Phlegyas* Stål.

(= *Peliopelta* Uhl.)

47. *P. annulicrus* Stål. (= *abbreviata* Uhl.)

White Plains, common on bushes and grasses. Nymphs in last instar taken July 27.

Genus *Ædancala* A. & S.48. *Æ. dorsalis* Say.

White Plains, July 29. A single specimen.

Subfamily OXYCARENINÆ.

Genus *Crophius* Stål.49. *C. disconotus* Say.

White Plains, Oct. 5.

Subfamily APHANINÆ.

Genus *Ligyrocoris* Stål.50. *L. silvestris* Stål.

White Plains, June, July and August.

51. *L. constrictus* Say.

White Plains, June, July and August. Both are common.

Genus *Perigenes* Distant.52. *P. fallax* Heid.

White Plains, Sept. 5, 7 and 15. This is not rare in grasses.

Genus *Myodocha* Latr.

53. *M. serripes* Olivier.

White Plains. At all seasons. In March more or less torpid under stones; in the summer months taken in similar situations and at electric lights. The nymphs are found with the adults in such places, some as late as the middle of October. Scarsdale, Aug. 29.

Genus *Heræus* Stål.

54. *H. plebejus* Stål.

White Plains, July 17. At electric light in company with the preceding.

Genus *Orthœa* Dallas.

(= *Pamera* Say.)

55. *O. basalis* Say.

White Plains, July 22, Aug. 4, Sept. 7, Oct. 5. Scarsdale, Sept. 5.

Genus *Rhyparochromus* Curt.

56. *R. unus* Say.

White Plains, Sept. 7 and 14.

Genus *Emblethis* Fieb.

57. *E. sp.*

White Plains, Oct. 3 and 18. Found under stones and creeping about the roots of grasses in a sandy, weedy spot, very dry. I have several other unidentified species in this family.

Family TINGIDÆ.

Subfamily PIESMINÆ.

Genus *Piesma* Lep. & Serv.

58. *P. cinerea* Say.

White Plains, March 3, May 3 and 10, Oct. 17. In the early spring found under the bark of button-ball in company with *Corythuca ciliata*.

Subfamily TINGIDINÆ.

Genus *Melanorhopala* Stål.

(= *Cantacader* Ashm. ; *nec* A. & S.¹)

59. *M. clavata* Stål. (= *Cantacader henshawi* Ashm. *teste* Dr. G. Horvath.)[†]

White Plains, July 18, 22 and 28, Aug. 3 and 30. This has been taken mainly by sweeping in rank weedy places near damp

[†]My attention was called to the synonymy of this genus and species by Dr. Horvath, who saw the types.

swampy meadows. There are several degrees of wing-development, but I have taken only fully winged individuals.

Genus *Corythuca* Stål.

60. *C. ciliata* Say.

White Plains. Very abundant through the year on sycamore (*Platanus occidentalis*), in the summer on the under-side of the leaves, in all stages, and in winter hibernating under the loose bark.

61. *C. arcuata* Say.

White Plains, August, Sept. 26 and Oct. 11. Scarsdale, Aug. 5. Beaten from oaks.

62. *C. pergandei* Heid.

Van Cortlandt Pk. (in New York City) in August.

63. *C. gossypii* Fab.

White Plains, quite common and abundant on honey-balls.

Superfamily *NEPOIDEA* Kirk.

Family NABIDÆ.

Genus *Pagasa* Stål.

64. *P. fusca* Stein.

White Plains, Aug. 23 (nymph) and 30 and Oct. 18. Found under stones.

Genus *Reduviolus* Kirby.

65. *R. subcoleoptratus* Kirby.

White Plains, May 31 and June 26 (nymphs); July 11, 19 and 25; Aug. 25 (winged adult).

Family MESOVELIIDÆ.

Genus *Mesovelgia* M. & R.

66. *M. bisignata* Uhl. (= *mulsanti* Champ. *et auct.*)

White Plains, common on duckweed or matted hydrodictyon or other algæ floating on the surface of ponds. Kensico L. (Valhalla) May 27. I have restored Uhler's name to our form, because after several fiascos, I have come to disbelieve in the identity of American forms with European or Oriental. Until I have the opportunity to make a critical comparison between the two species, I shall continue to consider ours distinct.

Family GERRIDÆ.

Subfamily VELIINÆ.

Genus *Rhagovelia* Mayr.67. *R. obesa* Uhl.

White Plains. Common in streams especially such as have a surfit current, from early spring to late fall.

68. *R. americana* Uhl.

White Plains. Common all the year except in winter, in springs, ponds, streams, running along the banks or clinging to rocks. Hibernates as adult. Scarsdale, Sept. 5. Portchester, Aug. 8. Found a large number of winged adults in a roadside horse-trough, fed by water from a spring.

69. *R. capitata* Guér.

White Plains, May 30.

70. *R. sp.* (= *pulchella* auct. for N. Am. form.)

White Plains. This is the commonest species in the eastern United States, and its white-flecked, dark-slate body is seen in every pond.

Subfamily GERRINÆ.

Genus *Gerris* Fabr.71. *G. remigis* Say.

White Plains, as early as March 21, and as late as Oct. 28. Scarsdale, Sept. 5. Portchester, in trough, Aug. 8. This is the commonest form in the East, and is found in streams (sometimes in ponds, but rarely) from early spring to late fall.

72. *G. conformis* Uhl.

White Plains, June 6 and 22; July 16 and 19; Sept. 1. This species is very rare in the north, but further south, in the Carolinas, appears to be nearly as common as *remigis* is with us.

73. *G. marginatus* Say.

White Plains. Common in ponds through the warmer portion of the year.

74. *G. canaliculatus* Say.

White Plains, July 16 and 19. This is a rare form.

75. *G. rufoscutellatus* Latr.

White Plains, July 16.

Genus Trepobates Uhler.76. *T. pictus* H. S.

White Plains. Very abundant all through the summer on St. Mary's L., where I secured three fully winged adults. Other adults with wings broken off by themselves were secured on Todd's Pond.

Genus Rheumatobates Berger.77. *Rh. rileyi* Bergr.

White Plains, in company with *Trepobates*, and quite as abundant.

Family HYDROMETRIDÆ.

Genus Hydrometra Latr.78. *H. martini* Kirk.

White Plains, May 30, June 21, July 22 and 28, Aug. 10.

Family NÆOGEIDÆ.

(= *Hebridae* auct.)

Genus Næogeus Lap.79. *N. concinnus* Uhl.

White Plains, June 1, 15, 22 and 30. This was quite common on the muddy bottom of a dried up temporary pool, creeping leisurely about.

Family REDUVIIDÆ.

Subfamily EMESINÆ.

Genus Emesa Fabr.80. *E. longipes* de G.

White Plains, Sept. 5, 7 and 14. Scarsdale, Sept. 5. Kensico (Valhalla), May 27 (nymph). Found in shrubbery along the edges of fields.

Genus Barce Stål.81. *B. annulipes* Stål.

White Plains, Oct. 10. Under a stone.

82. *B. simplicipes* Uhl.

White Plains, Oct. 25. Under a log.

Subfamily SAICINÆ.

Genus Oncerotrachelus Stål.83. *O. acuminatus* Say.

White Plains, latter part of September. Flew into a house, at night, to light.

Subfamily STENOPODINÆ.

Genus *Stenopoda* Lap. & de Cast.84. *S. culicis* Fabr.

White Plains, July 2. Flew into the house at night and lighted on a piece of music on the piano rack.

Subfamily PIRATINÆ.

Genus *Melanolestes* Stål.85. *M. picipes* H. S.

White Plains, Oct. 10. Nymph in last instar, which later changed to adult in a little glass jar in the house. This nymph was noted under the same stone for over a week.

86. *M. abdominalis* H. S.

White Plains, Aug. 30 and Sept. 7 and 20. Both taken under stones in the last nymphal instar. The first was taken home as soon as found, and kept in a small covered glass dish, but died before transforming. The second was noted for about two weeks under the same stone in a field, and was at last brought home in the hope that it would transform. It was kept in the small glass dish, and with it were put a couple of pill-bugs, which did not long survive. One or two others had the same fate, and finally the bug made the last moult successfully. It should be noted that the spongy portion of the anterior tibiæ appears to be adhesive.

Subfamily HARPACTORINÆ.

Genus *Zelus* Fabr.87. *Z. (Pindus) socius* Uhl.

White Plains, July 27.

Genus *Sinea* A. & S.88. *S. diadema* Fabr.

White Plains, Aug. 4. Swept in patches of clover in a field. I have elsewhere taken this bug in similar places.

Family NEPIDÆ.

Genus *Ranatra* Fabr.89. *R. quadridentata* Stål.

This is the only species thus far found and is locally abundant.

Family MACROCEPHALIDÆ Kirk.

(= *Phymatidæ auct.*)Genus *Phymata* Latr.90. *P. erosa* Linné.

Scarsdale, Sept. 5.

Superfamily MIROIDEA.

Family ANTHOCORIDÆ.

Genus *Piezostethus* Fieb.91. *P. sordidus* Rent.

White Plains, Aug. 22 and 24. Under bark of dead trees.

Genus *Triphleps* Fieb.92. *T. insidiosus* Say.

White Plains, through the summer and fall on flowers, especially daisy-heads. Scarsdale, Aug. 15.

Family CLINOCORIDÆ.

(= *Cimicidæ olim*, = *Acanthiidæ olim.*)Genus *Clinocoris* Fall.(= *Cimex auct. nec* Linné; = *Acanthia auct. nec* Fabr.)93. *C. lectularius* Linné.White Plains is *not* one of those happy places where this blood-thirsty midnight prowler is unknown.

Superfamily NOTONECTOIDEA.

Family ACANTHIIDÆ.

Genus *Acanthia* Fabr.94. *A. confluenta* Say.

White Plains, June 20 and 21, July 11, Sept. 21. Generally found on granite rocks, with the mottled black and white color of which it harmonizes.

95. *A. humilis* Say.

White Plains, common on moist places on the banks of streams, ponds, etc. Kensico (Valhalla), May 27; Tarrytown, July 23. Found here by sweeping the rushes on a damp flat near the railroad track.

Family OCHTERIDÆ.

Genus *Ochterus* Latr.(= *Pelogonus olim.*)96. *O. americanus* Uhl.

White Plains, July 16 and September 1.

Family NAUCORIDÆ.

Subfamily NAUCORINÆ.

Genus *Pelocoris* Stål97. *P. femoratus* Pal. Beauv.

White Plains, Aug. 24. Nymphs only. I have seen no adults and it does not appear to be common hereabouts.

Family BELOSTOMATIDÆ.

Genus *Benacus* Stål.98. *B. griseus* Say.

White Plains, May 18, at electric light.

Genus *Lethocerus* Mayr.(= *Amorgius* Stål = *Belostoma auct. nec* Latr.)99. *L. americanus* Leidy.

White Plains, May 14, at electric light; June 1, taken dredging in a ditch; July 23, also taken by dredging, a just transformed adult.

100. *L. obscurus* Duf.

White Plains, April 29, May 14 and 18, September; all at electric light. This appears to be the common species here.

Genus *Belostoma* Latr.(= *Zaitha auct.*)101. *B. flumineum* Say.

White Plains, common in ponds at all times.

Family NOTONECTIDÆ.

Subfamily NOTONECTINÆ.

Genus *Notonecta* Linné.102. *N. insulata* Kirby.

White Plains. Quite abundant in spring and late summer in deep, cool pools.

103. *N. irrorata* Uhl.

Common in suitable situations about White Plains, in spring and late summer.

104. *N. undulata* Say.

Common in suitable situations throughout the year, about White Plains.

105. *N. variabilis* Fieb.

White Plains. Kensico (Valhalla), May 27.

Genus *Buenoa* Kirk.

(= *Anisops*, in part, for American forms.)

106. *B. platycnemis* Fieb.

White Plains, July 11.

107. *B. elegans* Fieb.

White Plains, Aug. 29.

108. *B. margaritacea* **nom. nov.** (= *platycnemis*, Uhl., Bueno,¹ et auct. nec Fieber.)

White Plains, July 11. Very abundant and common, in company with *elegans*.

The family Corixidæ is still in too chaotic a condition to make it advisable to list. It would only be adding to a sufficiently confused situation to record what may or may not be the species for the sake of swelling a list.

It should be noted that in addition to the species enumerated in the foregoing there are quite a few still not identified to my satisfaction, and hence not included.

¹ Journ. N. Y. Ent. Soc., X, 236.